



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/712,708

11/12/2003

Chin-ming Chen

JLINP174

9264

25920 7590 03/19/2010
MARTINE PENILLA & GENCARELLA, LLP
710 LAKEWAY DRIVE
SUITE 200
SUNNYVALE, CA 94085

EXAMINER

CIRIC, LJILJANA V

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

03/19/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/712,708	Applicant(s) CHEN ET AL.	
	Examiner Ljiljana (Lil) V. Ciric	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-10 and 12-25 is/are pending in the application.
- 4a) Of the above claim(s) 4-9 and 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 12-14, 21-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 22, 2008 as well as the corresponding corrected amendment filed on December 24, 2009 have been entered.

Election/Restrictions

2. Claims 4 through 9 and 15 through 20 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected first species or the embodiment of Figures 2 and 3, there being no allowable generic or linking claim. Election was made **without** proper traverse in the reply filed on July 7, 2006.

Response to Arguments

3. Applicant's arguments filed on November 2, 2007 with respect to the previously rejected claims have been considered but are moot in view of the new grounds of rejection presented herein.

Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claim 1, 10, 14, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (U.S. Patent No. 3,999,400; previously of record).

Gray, particularly Figure 6, discloses the inventive heat dissipation module essentially as claimed, including, for example: a fan having blades 73 and a hollow shaft (formed as a heat pipe 76), the first end of the shaft 70 penetrating the hub of the fan as shown in Figure 6, the first end of the shaft 70 also physically connected to a heat generating element (i.e., compressed refrigerant in passages 75; see column

Art Unit: 3744

8, lines 3-26); and, a heat sink or conductive disc 80 (see column 8, lines 27-40) connected to the second end of the shaft 70. The fan (or at least a portion of the fan) is thus disclosed as being disposed between the heat generating element and the heat sink or conductive disc 80, at least as broadly interpreted as required. Gray also discloses a stator assembly fixed within housing 71 on the heat pipe 76 as well as a rotor wound about the shaft or heat pipe 76 and thus rotatably connected thereto.

The reference thus reads on the claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12, 13, and 21 through 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray (U.S. Patent No. 3,999,400; previously of record) in view of Siemens AG (CH 516 251; previously of record).

Gray, particularly Figure 6, discloses the inventive heat dissipation module essentially as claimed, including, for example: a fan having blades 73 and a hollow shaft (formed as a heat pipe 76), the first end of the shaft 70 penetrating the hub of the fan as shown in Figure 6, the first end of the shaft 70 also physically connected to a heat generating element (i.e., compressed refrigerant in passages 75; see column 8, lines 3-26); and, a heat sink or conductive disc 80 (see column 8, lines 27-40) connected to the second end of the shaft 70. The fan (or at least a portion of the fan) is thus disclosed as being disposed between the heat generating element and the heat sink or conductive disc 80, at least as broadly interpreted as required. Gray also discloses a stator assembly fixed within housing 71 on the heat pipe 76 as well as a rotor wound about the shaft or heat pipe 76 and thus rotatably connected thereto.

Art Unit: 3744

While Gray discloses the heat pipe 16 as being made of a non-specific metal (see cross-hatching in Figure 2, for example), Gray fails to disclose that the materials of the heat pipe 16 are specifically selected from the group consisting of aluminum, copper, aluminum alloy, copper alloy, and compounds thereof. Nevertheless, it is known in the art of making heat pipes and taught by Siemens AG to have a heat pipe made of a highly conductive material such as aluminum or copper. Thus, it would have been obvious to one skilled in the art at the time of invention to modify the heat dissipation module of Gray to have the heat pipe 16 made of copper or aluminum or a compound thereof as taught by Siemens AG in order to ensure high thermal conductivity into and out of the heat pipe 16 while also facilitating manufacturability thereof.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric whose telephone number is 571-272-4909. The examiner works a flexible work schedule but can normally be reached on most days during the work week between the hours of 10:30 a.m. and 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ljiljana (Lil) V. Ciric/

Primary Examiner, Art Unit 3744